

Docket No. DE 2309.02 US
USSN: 09/855,003

PATENT
Art Unit: 2653

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1. (CURRENTLY AMENDED) A magnetic position device, comprising:

a movable element having a first yoke assembly, said first yoke assembly including one or more movable yokes; and

a fixed element adjacent to said movable element for generating a magnetic field to control said movable element movement toward a position, said fixed element having a magnetic assembly which comprises one or more permanent magnets connected to a second yoke assembly configured to generate a magnetic field.

Claim 2. (PREVIOUSLY PRESENTED) The magnetic position device according to Claim 1, wherein said magnetic assembly comprises:

a first coil for generating a first motive force in a first direction in response to the magnetic flux of said magnetic field; and

a second coil for generating a second motive force in a second direction in response to the magnetic flux of said magnetic field.

Claim 3. (ORIGINAL) The magnetic position device according to Claim 2, wherein said second coil is perpendicular to said first coil.

Claim 4. (ORIGINAL) The magnetic position device according to Claim 2, wherein said second direction is perpendicular to said first direction.

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Claim 5. (ORIGINAL) The magnetic position device according to Claim 2, wherein said first coil and said second coil are wound around said second yoke assembly.

Claim 6. (CURRENTLY AMENDED) The magnetic position device according to Claim 1, wherein said [magnet] magnetic assembly comprises a plurality of permanent magnets.

Claim 7. (PREVIOUSLY PRESENTED) The magnetic position device according to Claim 2, wherein said movable element is capable of being moved along said first direction by said first motive force acted on said yoke assembly.

Claim 8. (PREVIOUSLY PRESENTED) The magnetic position device according to Claim 7, wherein said movable element is capable of being moved along said second direction by said second motive force acted on said yoke assembly.

Claim 9. (ORIGINAL) The magnetic position device according to Claim 8, wherein said first coil is a tracking coil.

Claim 10. (ORIGINAL) The magnetic position device according to Claim 9, wherein said second coil is a focusing coil.

Claim 11. (CURRENTLY AMENDED) The magnetic position device according to Claim 1, wherein said [yoke assembly comprises two] one or more movable yokes [being] are mounted on two opposite sides of said movable element, respectively.

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Claim 12. (CANCELED)

Claim 13. (PREVIOUSLY PRESENTED) The magnetic position device according to Claim 1, wherein said movable element comprises an optical lens.

Claim 14. (CURRENTLY AMENDED) A magnetic position device, comprising:

a movable element having a first yoke assembly, said first yoke assembly including one or more movable yokes; and

a fixed element adjacent to said movable element for generating a magnetic field and having coil assembly, wherein said coil assembly generates a motive force in response to the magnetic flux of said magnetic field to control said movable element movement toward a position.

Claim 15. (ORIGINAL) The magnetic position device according to Claim 14, wherein said coil assembly comprises a focusing coil and a tracking coil.

Claim 16. (ORIGINAL) The magnetic position device according to Claim 14, wherein said fixed element further comprises a second yoke assembly and a magnet assembly connected with said second yoke to generate said magnetic field.

Claim 17. (CURRENTLY AMENDED) A position device capable of controlling the position of an optical lens, comprising:

a movable element having a yoke assembly, said yoke assembly including one or more movable yokes; and

a fixed element adjacent to said movable element for generating a magnetic field and having a coil assembly, wherein said coil assembly generates a motive

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force in response to the magnetic flux of said magnetic field, thereby controlling said optical lens movement toward a position.

Claim 18. (ORIGINAL) The position device according to Claim 17, wherein said optical lens is mounted in said movable element.

Claim 19. (CURRENTLY AMENDED) An objective lens driver, comprising:
a movable element having an objective lens attached thereto comprising a first yoke assembly, said first yoke assembly including one or more movable yokes; and

a fixed element adjacent to said movable element configured to generate a magnetic force to move said movable element toward a position, comprising:

a second yoke assembly;

a magnetic assembly comprising one or more permanent magnets connected to said second yoke assembly configured to generate said magnetic field;

a first coil configured to generate a first motive force in a first direction in response to the magnetic flux of said magnetic field; and

a second coil configured to generate a second motive force in a second direction in response to the magnetic flux of said magnetic field.

Claim 20. (CURRENTLY AMENDED) An objective lens driver, comprising:
a movable element comprising:

an objective lens; and

one or more first movable yokes; and

a fixed element comprising:

one or more second yokes;

one or more permanent magnets;

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focus coils for driving said movable element in a focus direction; and
tracking coils for driving said movable element in a tracking direction.

Claim 21. (CURRENTLY AMENDED) An objective lens driver, comprising:
a movable element having attached thereto an objective lens but not having attached thereto a permanent magnet, a tracking coil, and a focusing coil, said movable element including one or more movable yokes.

Claim 22. (PREVIOUSLY PRESENTED) The objective lens driver of claim 21, further comprising:

a fixed element comprising said permanent magnet, said tracking coil, and said focusing coil so as to generate a magnetic flux which moves said movable element.

Claim 23. (CURRENTLY AMENDED) An object lens drive, comprising:
a movable element having attached thereto an objective lens and a movable yoke; and

a fixed element adjacent to said movable element to form a gap therebetween and comprising a permanent magnet, a tracking coil, and a focusing coil for generating a magnetic flux across said gap which moves said movable element.

Claim 24. (CURRENTLY AMENDED) A method for driving an optical lens, comprising the steps of:

providing a movable assembly having connected thereto an optical lens, said movable assembly including one or more movable yokes;

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generating a magnetic flux between said movable assembly and said fixed assembly so as to move said movable assembly with respect to said fixed assembly.

Claim 25. (NEW) The method of claim 24 wherein said one or more movable yokes are mounted on said movable assembly.